FACILITY NAME AND PERMIT NUMBER:
Shenandoah Crossing STP VA0076678

Form Approved 1/14/99
OMB Number 2040-0086

FORM 2A NPDES

NPDES FORM 2A APPLICATION OVERVIEW

APPLICATION OVERVIEW

Form 2A has been developed in a modular format and consists of a "Basic Application Information" packet and a "Supplemental Application Information" packet. The Basic Application Information packet is divided into two parts. All applicants must complete Parts A and C. Applicants with a design flow greater than or equal to 0.1 mgd must also complete Part B. Some applicants must also complete the Supplemental Application Information packet. The following items explain which parts of Form 2A you must complete.

BASIC APPLICATION INFORMATION:

A. **Basic Application Information for all Applicants.** All applicants must complete questions A.1 through A.8. A treatment works that discharges effluent to surface waters of the United States must also answer questions A.9 through A.12.

B. **Additional Application Information for Applicants with a Design Flow ≥ 0.1 mgd.** All treatment works that have design flows greater than or equal to 0.1 million gallons per day must complete questions B.1 through B.6.

C. **Certification.** All applicants must complete Part C (Certification).

SUPPLEMENTAL APPLICATION INFORMATION:

D. **Expanded Effluent Testing Data.** A treatment works that discharges effluent to surface waters of the United States and meets one or more of the following criteria must complete Part D (Expanded Effluent Testing Data):

1. Has a design flow rate greater than or equal to 1 mgd,
2. Is required to have a pretreatment program (or has one in place), or
3. Is otherwise required by the permitting authority to provide the information.

E. **Toxicity Testing Data.** A treatment works that meets one or more of the following criteria must complete Part E (Toxicity Testing Data):

1. Has a design flow rate greater than or equal to 1 mgd,
2. Is required to have a pretreatment program (or has one in place), or
3. Is otherwise required by the permitting authority to submit results of toxicity testing.

F. **Industrial User Discharges and RCRA/CERCLA Wastes.** A treatment works that accepts process wastewater from any significant industrial users (SIUs) or receives RCRA or CERCLA wastes must complete Part F (Industrial User Discharges and RCRA/CERCLA Wastes). SIUs are defined as:

1. All industrial users subject to Categorical Pretreatment Standards under 40 Code of Federal Regulations (CFR) 403.6 and 40 CFR Chapter I, Subchapter N (see instructions); and
2. Any other industrial user that:
   a. Discharges an average of 25,000 gallons per day or more of process wastewater to the treatment works (with certain exclusions); or
   b. Contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the treatment plant; or
   c. Is designated as an SIU by the control authority.

G. **Combined Sewer Systems.** A treatment works that has a combined sewer system must complete Part G (Combined Sewer Systems).

ALL APPLICANTS MUST COMPLETE PART C (CERTIFICATION)

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BASIC APPLICATION INFORMATION

PART A. BASIC APPLICATION INFORMATION FOR ALL APPLICANTS:

All treatment works must complete questions A.1 through A.8 of this Basic Application Information packet.

A.1. Facility Information.

Facility name: Shenandoah Crossing STP

Mailing Address: 174 Horseshoe Cir
Gordonsville, VA 22942

Contact person: Tim Bernhardt

Title: Development Manager

Telephone number: (540)832-9508

Facility Address (not P.O. Box): 174 Horseshoe Cir
Gordonsville, VA 22942

A.2. Applicant Information. If the applicant is different from the above, provide the following:

Applicant name:

Mailing Address:

Contact person:

Title:

Telephone number:

Is the applicant the owner or operator (or both) of the treatment works?

X owner X operator

Indicate whether correspondence regarding this permit should be directed to the facility or the applicant.

___ facility X applicant

A.3. Existing Environmental Permits. Provide the permit number of any existing environmental permits that have been issued to the treatment works (include state-issued permits).

NPDES: VA0076678
UIC:
RCRA:
PSD:
Other: Nutrient General Permit VAN030119
Other:

A.4. Collection System Information. Provide information on municipalities and areas served by the facility. Provide the name and population of each entity and, if known, provide information on the type of collection system (combined vs. separate) and its ownership (municipal, private, etc.).

Name	Population Served	Type of Collection System	Ownership
Shenandoah Crossing	950	Separate	Private

Total population served 950

A.5. Indian Country.

a. Is the treatment works located in Indian Country?

_____ Yes X No

b. Does the treatment works discharge to a receiving water that is either in Indian Country or that is upstream from (and eventually flows through) Indian Country?

_____ Yes X No

A.6. Flow. Indicate the design flow rate of the treatment plant (i.e., the wastewater flow rate that the plant was built to handle). Also provide the average daily flow rate and maximum daily flow rate for each of the last three years. Each year's data must be based on a 12-month time period with the 12th month of "this year" occurring no more than three months prior to this application submittal.

a. Design flow rate 0.1 mgd

	Two Years Ago	Last Year	This Year	
b. Annual average daily flow rate	.0468	.0463	.0432	mgd
c. Maximum daily flow rate	.0682	.1014	.0970	mgd

A.7. Collection System. Indicate the type(s) of collection system(s) used by the treatment plant. Check all that apply. Also estimate the percent contribution (by miles) of each.

X Separate sanitary sewer _____ %

_____ Combined storm and sanitary sewer _____ %

A.8. Discharges and Other Disposal Methods.

a. Does the treatment works discharge effluent to waters of the U.S.? X Yes _____ No

If yes, list how many of each of the following types of discharge points the treatment works uses:

i. Discharges of treated effluent 1

ii. Discharges of untreated or partially treated effluent _____

iii. Combined sewer overflow points _____

iv. Constructed emergency overflows (prior to the headworks) _____

v. Other _____ _____

b. Does the treatment works discharge effluent to basins, ponds, or other surface impoundments that do not have outlets for discharge to waters of the U.S.? _____ Yes X No

If yes, provide the following for each surface impoundment:

Location: _____

Annual average daily volume discharged to surface impoundment(s) _____ mgd

Is discharge _____ continuous or _____ intermittent?

c. Does the treatment works land-apply treated wastewater? _____ Yes X No

If yes, provide the following for each land application site:

Location: _____

Number of acres: _____

Annual average daily volume applied to site: _____ Mgd

Is land application _____ continuous or _____ intermittent?

d. Does the treatment works discharge or transport treated or untreated wastewater to another treatment works? _____ Yes X No

If yes, describe the mean(s) by which the wastewater from the treatment works is discharged or transported to the other treatment works (e.g., tank truck, pipe).

If transport is by a party other than the applicant, provide:

Transporter name:

Mailing Address:

Contact person:

Title:

Telephone number:

For each treatment works that receives this discharge, provide the following:

Name:

Mailing Address:

Contact person:

Title:

Telephone number:

If known, provide the NPDES permit number of the treatment works that receives this discharge.

Provide the average daily flow rate from the treatment works into the receiving facility. mgd

e. Does the treatment works discharge or dispose of its wastewater in a manner not included in A.8.a through A.8.d above (e.g., underground percolation, well injection)? ____ Yes X No

If yes, provide the following for each disposal method:

Description of method (including location and size of site(s) if applicable):

Annual daily volume disposed of by this method:

Is disposal through this method ____ continuous or ____ intermittent?

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WASTEWATER DISCHARGES:

If you answered "yes" to question A.8.a, complete questions A.9 through A.12 **once for each outfall** (including bypass points) through which effluent is discharged. Do not include information on combined sewer overflows in this section. **If you answered "no" to question A.8.a,** go to Part B, "Additional Application Information for Applicants with a Design Flow Greater than or Equal to 0.1 mgd."

A.9. Description of Outfall.

a. Outfall number 001

b. Location

(City or town, if applicable)	(Zip Code)
Louisa	VA
(County)	(State)
38°04'32" N	78°08'57" W
(Latitude)	(Longitude)

c. Distance from shore (if applicable) _____ ft.

d. Depth below surface (if applicable) _____ ft.

e. Average daily flow rate 0.1 mgd

f. Does this outfall have either an intermittent or a periodic discharge? _____ Yes X No (go to A.9.g.)

If yes, provide the following information:

Number of times per year discharge occurs: _____

Average duration of each discharge: _____

Average flow per discharge: _____ mgd

Months in which discharge occurs: _____

g. Is outfall equipped with a diffuser? _____ Yes X No

A.10. Description of Receiving Waters.

a. Name of receiving water Lickinghole Creek

b. Name of watershed (if known) York

United States Soil Conservation Service 14-digit watershed code (if known): _____

c. Name of State Management/River Basin (if known): _____

United States Geological Survey 8-digit hydrologic cataloging unit code (if known): _____

d. Critical low flow of receiving stream (if applicable):
acute _____ cfs chronic _____ cfs

e. Total hardness of receiving stream at critical low flow (if applicable): _____ mg/l of $CaCO_3$

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A.11. Description of Treatment.

a. What levels of treatment are provided? Check all that apply.

X Primary X Secondary

X Advanced _____ Other. Describe: _____

b. Indicate the following removal rates (as applicable):

Design BOD_5 removal or Design $CBOD_5$ removal	>95	%
Design SS removal	>95	%
Design P removal	>80	%
Design N removal	>80	%
Other _____	_____	%

c. What type of disinfection is used for the effluent from this outfall? If disinfection varies by season, please describe.

Chlorination

If disinfection is by chlorination, is dechlorination used for this outfall? X Yes _____ No

d. Does the treatment plant have post aeration? X Yes _____ No

A.12. Effluent Testing Information. All Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three samples and must be no more than four and one-half years apart.

Outfall number: 001 (Samples taken from October 2011 to October 2012)

PARAMETER	MAXIMUM DAILY VALUE		AVERAGE DAILY VALUE		
	Value	Units	Value	Units	Number of Samples
pH (Minimum)	7.42	s.u.			
pH (Maximum)	7.76	s.u.			
Flow Rate	0.0970	mgd	.0432	mgd	305
Temperature (Winter)	6	°C	13	°C	183
Temperature (Summer)	30	°C	22	°C	183

* For pH please report a minimum and a maximum daily value

POLLUTANT		MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML / MDL
		Conc.	Units	Conc.	Units	Number of Samples		
CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.								
BIOCHEMICAL OXYGEN	BOD-5							
DEMAND (Report one)	CBOD-5	7	mg/L	2.5	mg/L	24	SM 19 5210B	2.00 mg/L
FECAL COLIFORM (E. Coli)		4.8	n/100 mL	1.3	n/100 mL	24	Colilert/Colilert-18	1 MPN/100 mL
TOTAL SUSPENDED SOLIDS (TSS)		6.5	mg/L	3.0	mg/L	24	SM 19 2540D	1.00 mg/L

END OF PART A.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

BASIC APPLICATION INFORMATION

PART B. ADDITIONAL APPLICATION INFORMATION FOR APPLICANTS WITH A DESIGN FLOW GREATER THAN OR EQUAL TO 0.1 MGD (100,000 gallons per day).

All applicants with a design flow rate ≥ 0.1 mgd must answer questions B.1 through B.6. All others go to Part C (Certification).

B.1. Inflow and Infiltration. Estimate the average number of gallons per day that flow into the treatment works from inflow and/or infiltration.

unknown gpd

Briefly explain any steps underway or planned to minimize inflow and infiltration.

None

B.2. Topographic Map. Attach to this application a topographic map of the area extending at least one mile beyond facility property boundaries. This map must show the outline of the facility and the following information. (You may submit more than one map if one map does not show the entire area.)

a. The area surrounding the treatment plant, including all unit processes.

b. The major pipes or other structures through which wastewater enters the treatment works and the pipes or other structures through which treated wastewater is discharged from the treatment plant. Include outfalls from bypass piping, if applicable.

c. Each well where wastewater from the treatment plant is injected underground.

d. Wells, springs, other surface water bodies, and drinking water wells that are: 1) within 1/4 mile of the property boundaries of the treatment works, and 2) listed in public record or otherwise known to the applicant.

e. Any areas where the sewage sludge produced by the treatment works is stored, treated, or disposed.

f. If the treatment works receives waste that is classified as hazardous under the Resource Conservation and Recovery Act (RCRA) by truck, rail, or special pipe, show on the map where that hazardous waste enters the treatment works and where it is treated, stored, and/or disposed.

See attached.

B.3. Process Flow Diagram or Schematic. Provide a diagram showing the processes of the treatment plant, including all bypass piping and all backup power sources or redundancy in the system. Also provide a water balance showing all treatment units, including disinfection (e.g, chlorination and dechlorination). The water balance must show daily average flow rates at influent and discharge points and approximate daily flow rates between treatment units. Include a brief narrative description of the diagram.

See attached.

B.4. Operation/Maintenance Performed by Contractor(s).

Are any operational or maintenance aspects (related to wastewater treatment and effluent quality) of the treatment works the responsibility of a contractor? ___Yes X No

If yes, list the name, address, telephone number, and status of each contractor and describe the contractor's responsibilities (attach additional pages if necessary).

Name:

Mailing Address:

Telephone Number:

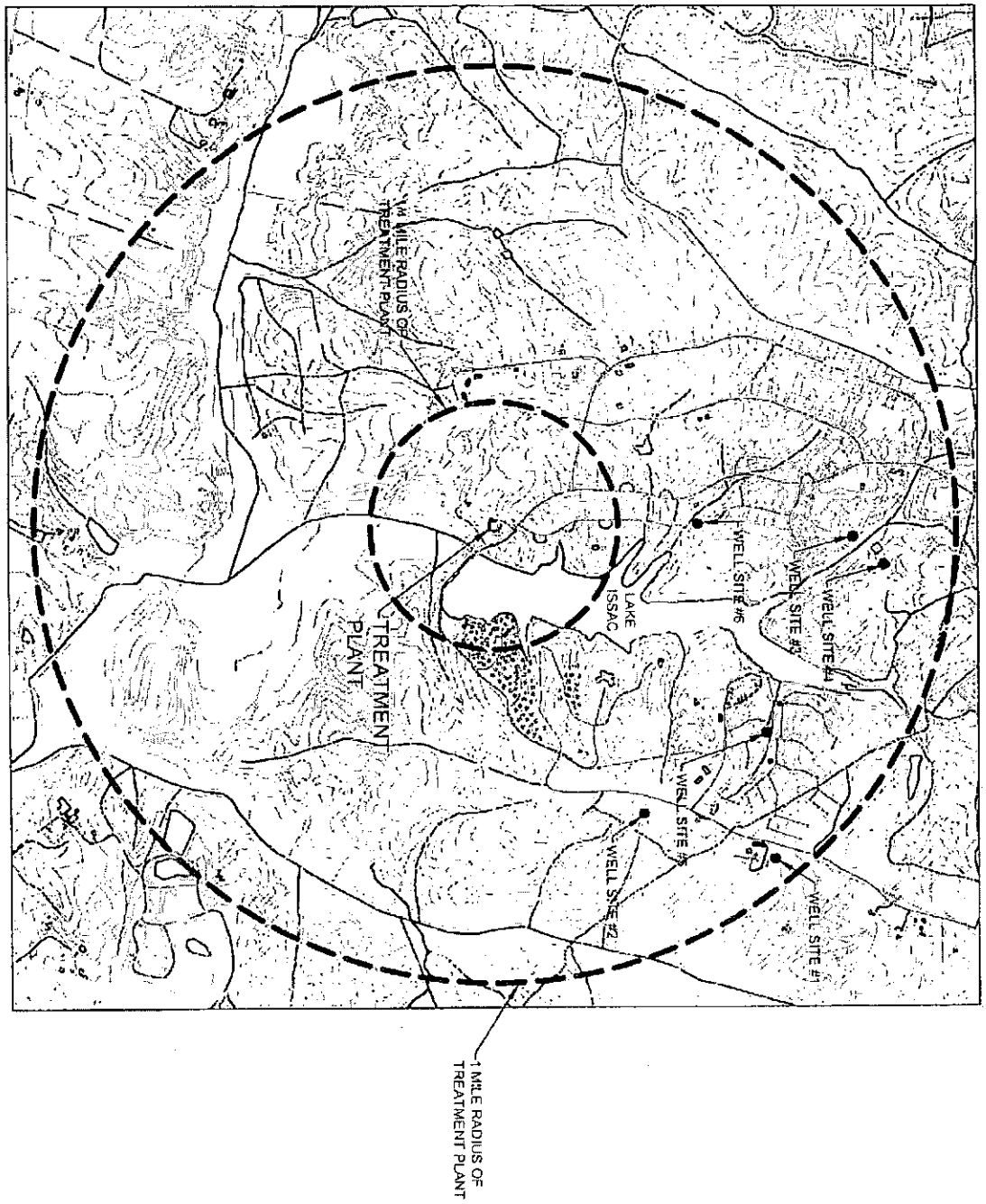
Responsibilities of Contractor:

B.5. Scheduled Improvements and Schedules of Implementation. Provide information on any uncompleted implementation schedule or uncompleted plans for improvements that will affect the wastewater treatment, effluent quality, or design capacity of the treatment works. If the treatment works has several different implementation schedules or is planning several improvements, submit separate responses to question B.5 for each. (If none, go to question B.6.)

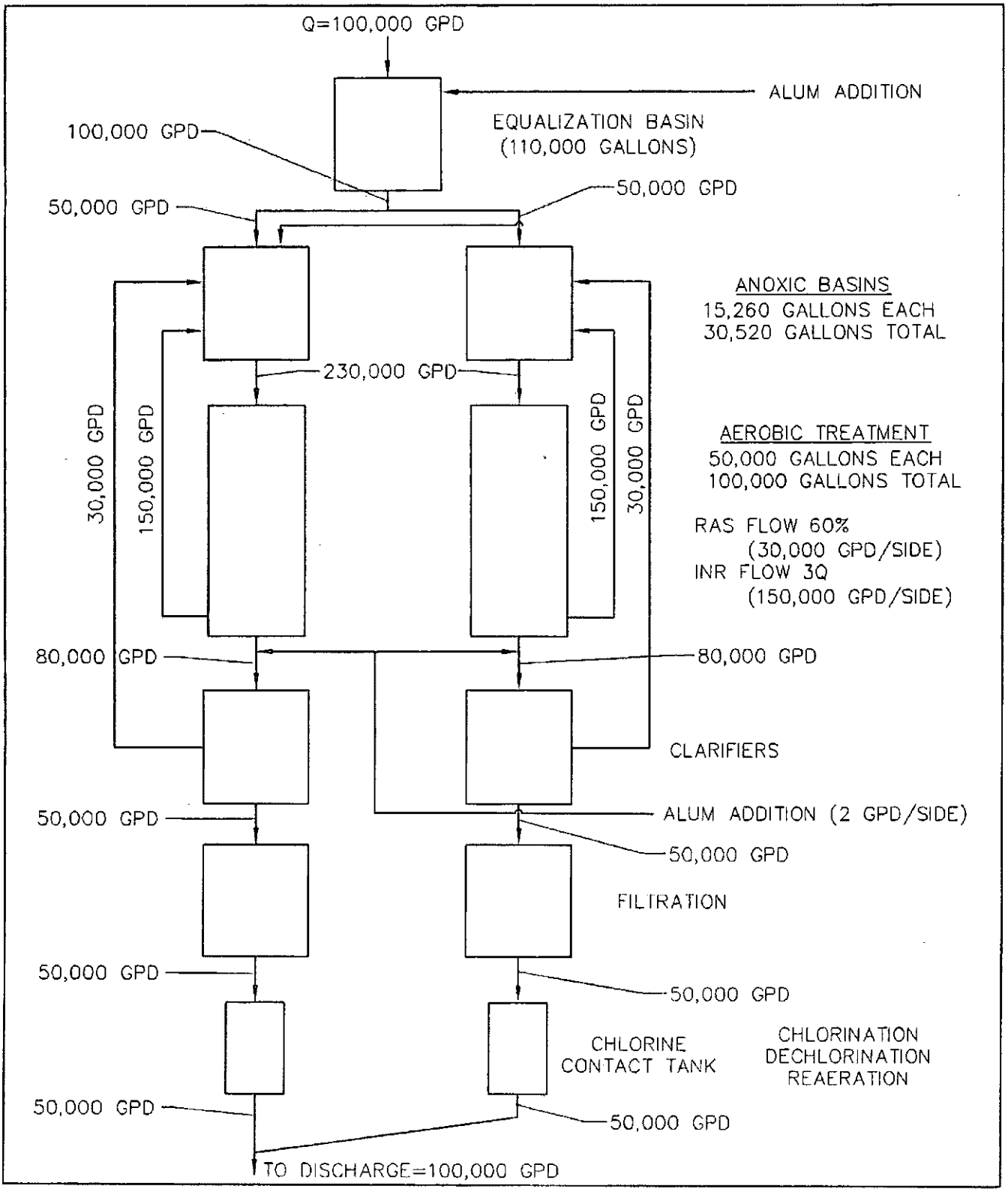
a. List the outfall number (assigned in question A.9) for each outfall that is covered by this implementation schedule.

b. Indicate whether the planned improvements or implementation schedule are required by local, State, or Federal agencies.

___Yes ___No



Dewberry Dewberry & Davis, Inc.	DATE DEC. 2012	SCALE 1"=1200'	TITLE TOPOGRAPHIC MAP	SHEET NO 1
	PROJ. NO. VA0076678	PROJECT SHENANDOAH CROSSING NPDES PERMIT		



Dewberry®	DATE DEC. 2012	TITLE TREATMENT SCHEMATIC	SHEET NO. 2
	PROJ. NO. VA0076678	PROJECT SHENANDOAH CROSSING NPDES PERMIT	

c If the answer to B.5.b is "Yes," briefly describe, including new maximum daily inflow rate (if applicable).

_____

d. Provide dates imposed by any compliance schedule or any actual dates of completion for the implementation steps listed below, as applicable. For improvements planned independently of local, State, or Federal agencies, indicate planned or actual completion dates, as applicable. Indicate dates as accurately as possible.

Implementation Stage	Schedule MM / DD / YYYY	Actual Completion MM / DD / YYYY
– Begin construction	__/__/____	__/__/____
– End construction	__/__/____	__/__/____
– Begin discharge	__/__/____	__/__/____
– Attain operational level	__/__/____	__/__/____

e. Have appropriate permits/clearances concerning other Federal/State requirements been obtained? ____Yes ____No

Describe briefly: _____

_____

B.6. EFFLUENT TESTING DATA (GREATER THAN 0.1 MGD ONLY).

Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall Number: 001

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML / MDL
	Conc.	Units	Conc.	Units	Number of Samples		
CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.							
AMMONIA (as N)							
CHLORINE (TOTAL RESIDUAL, TRC)	<QL	mg/L	<QL	mg/L	305	EPA #330.5	0.008 mg/L
DISSOLVED OXYGEN	986	mg/L	11.8	mg/L	305	SM 18th-4500-O-G	
TOTAL KJELDAHL NITROGEN (TKN)	2.2	mg/L	0.7	mg/L	20	SM 19 4500-NH3C	0.50 mg/L
NITRATE PLUS NITRITE NITROGEN	6.9	mg/L	5.6	mg/L	20	SM 20 4500 NO3F	0.050 mg/L
OIL and GREASE	16.1	mg/L	11.3	mg/L	2	EPA 1664A	5.0 mg/L
PHOSPHORUS (Total)	1.1	mg/L	0.6	mg/L	20	SM 19 4500-P E	0.05 mg/L
TOTAL DISSOLVED SOLIDS (TDS)	140	mg/L	265	mg/L	2	SM 19 2540C	10.0 mg/L
OTHER							

END OF PART B.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

FACILITY NAME AND PERMIT NUMBER:
Shenandoah Crossing STP VA0076678

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BASIC APPLICATION INFORMATION

PART C. CERTIFICATION

All applicants must complete the Certification Section. Refer to instructions to determine who is an officer for the purposes of this certification. All applicants must complete all applicable sections of Form 2A, as explained in the Application Overview. Indicate below which parts of Form 2A you have completed and are submitting. By signing this certification statement, applicants confirm that they have reviewed Form 2A and have completed all sections that apply to the facility for which this application is submitted.

Indicate which parts of Form 2A you have completed and are submitting:

X Basic Application Information packet

Supplemental Application Information packet:

_____ Part D (Expanded Effluent Testing Data)

_____ Part E (Toxicity Testing: Biomonitoring Data)

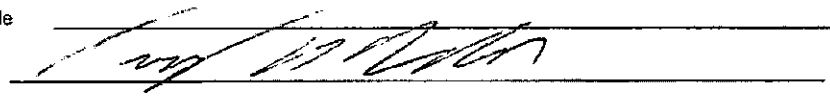
_____ Part F (Industrial User Discharges and RCRA/CERCLA Wastes)

_____ Part G (Combined Sewer Systems)

ALL APPLICANTS MUST COMPLETE THE FOLLOWING CERTIFICATION.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and official title _____

Signature 

Telephone number _____

Date signed 3/12/13

Upon request of the permitting authority, you must submit any other information necessary to assess wastewater treatment practices at the treatment works or identify appropriate permitting requirements.

SEND COMPLETED FORMS TO:

FACILITY NAME: Shenandoah Crossing STP VPDES PERMIT NUMBER: VA0076678

VPDES SEWAGE SLUDGE PERMIT APPLICATION FORM

SCREENING INFORMATION

This application is divided into sections. Sections A pertain to all applicants. The applicability of Sections B, C and D depend on your facility's sewage sludge use or disposal practices. The information provided on this page will help you determine which sections to fill out.

1. All applicants must complete Section A (General Information).

2. Will this facility generate sewage sludge? X Yes __No

   Will this facility derive a material from sewage sludge? __Yes X No

   If you answered Yes to either, complete Section B (Generation Of Sewage Sludge Or Preparation Of A Material Derived From Sewage Sludge).

3. Will this facility apply sewage sludge to the land? __Yes X No

   Will sewage sludge from this facility be applied to the land? X Yes __No
   Sludge is transferred to the Louisa Regional WWTP (VPDES Permit No. VA0067954) for stabilization and land application.
   If you answered No to both questions above, skip Section C.

   If you answered Yes to either, answer the following three questions:

   a. Will the sewage sludge from this facility meet the ceiling concentrations, pollutant concentrations, Class A pathogen reduction requirements and one of the vector attraction reduction requirements 1-8, as identified in the instructions?
   __Yes __No

   b. Will sewage sludge from this facility be placed in a bag or other container for sale or give-away for application to the land? __Yes __No

   c. Will sewage sludge from this facility be sent to another facility for treatment or blending? __Yes __No

   If you answered No to all three, complete Section C (Land Application Of Bulk Sewage Sludge).

   If you answered Yes to a, b or c, skip Section C.

4. Do you own or operate a surface disposal site? __Yes X No

   If Yes, complete Section D (Surface Disposal).

FACILITY NAME: Shenandoah Crossing STP VPDES PERMIT NUMBER: VA0076678

SECTION A. GENERAL INFORMATION

All applicants must complete this section.

1. Facility Information.
   a. Facility name: Shenandoah Crossing STP
   b. Contact person: Tim Bernhardt
      Title: Development Manager
      Phone: (540) 832-9508
   c. Mailing address:
      Street or P.O. Box: 174 Horseshoe Circle
      City or Town: Gordonsville State: VA Zip: 22942
   d. Facility location:
      Street or Route #: 174 Horseshoe Circle
      County: Louisa
      City or Town: Gordonsville State: VA Zip: 22942
   e. Is this facility a Class I sludge management facility? __Yes X No
   f. Facility design flow rate: 0.1 mgd
   g. Total population served: 950
   h. Indicate the type of facility:
      __ Publicly owned treatment works (POTW)
      X Privately owned treatment works
      __ Federally owned treatment works
      __ Blending or treatment operation
      __ Surface disposal site
      __ Other (describe): _____

2. Applicant Information. If the applicant is different from the above, provide the following:
   a. Applicant name: _____
   b. Mailing address:
      Street or P.O. Box: _____
      City or Town: _____ State: _____ Zip: _____
   c. Contact person: _____
      Title: _____
      Phone: ( ) _____
   d. Is the applicant the owner or operator (or both) of this facility?
      X owner X operator
   e. Should correspondence regarding this permit be directed to the facility or the applicant? (Check one)
      _____ facility X applicant

3. Permit Information.
   a. Facility's VPDES permit number (if applicable): VA0076678
   b. List on this form or an attachment, all other federal, state or local permits or construction approvals received or applied for that regulate this facility's sewage sludge management practices:

Permit Number:	Type of Permit:

4. Indian Country. Does any generation, treatment, storage, application to land or disposal of sewage sludge from this facility occur in Indian Country? __Yes X No If yes, describe:

_____

5. Topographic Map. Provide a topographic map or maps (or other appropriate maps if a topographic map is unavailable) that shows the following information. Maps should include the area one mile beyond all property boundaries of the facility:
   a. Location of all sewage sludge management facilities, including locations where sewage sludge is generated, stored, treated, or disposed.
   b. Location of all wells, springs, and other surface water bodies listed in public records or otherwise known to the applicant within 1/4 mile of the property boundaries.

   See attached.

6. Line Drawing. Provide a line drawing and/or a narrative description that identifies all sewage sludge processes that will be employed during the term of the permit including all processes used for collecting, dewatering, storing, or treating sewage sludge, the destination(s) of all liquids and solids leaving each unit, and all methods used for pathogen reduction and vector attraction reduction.

   Sludge holding tank, periodic decant, and transport to Louisa Regional WWTP.

7. Contractor Information. Are any operational or maintenance aspects of this facility related to sewage sludge generation, treatment, use or disposal the responsibility of a contractor? X Yes ___No
   If yes, provide the following for each contractor (attach additional pages if necessary).
   Name: Roto Rooter
   Mailing address:
   Street or P.O. Box: PO Box 534
   City or Town: Ruckersville State: VA Zip: 22968
   Phone: (434) 985-2295
   Contractor's Federal, State or Local Permit Number(s) applicable to this facility's sewage sludge:

   If the contractor is responsible for the use and/or disposal of the sewage sludge, provide a description of the service to be provided to the applicant and the respective obligations of the applicant and the contractor(s).

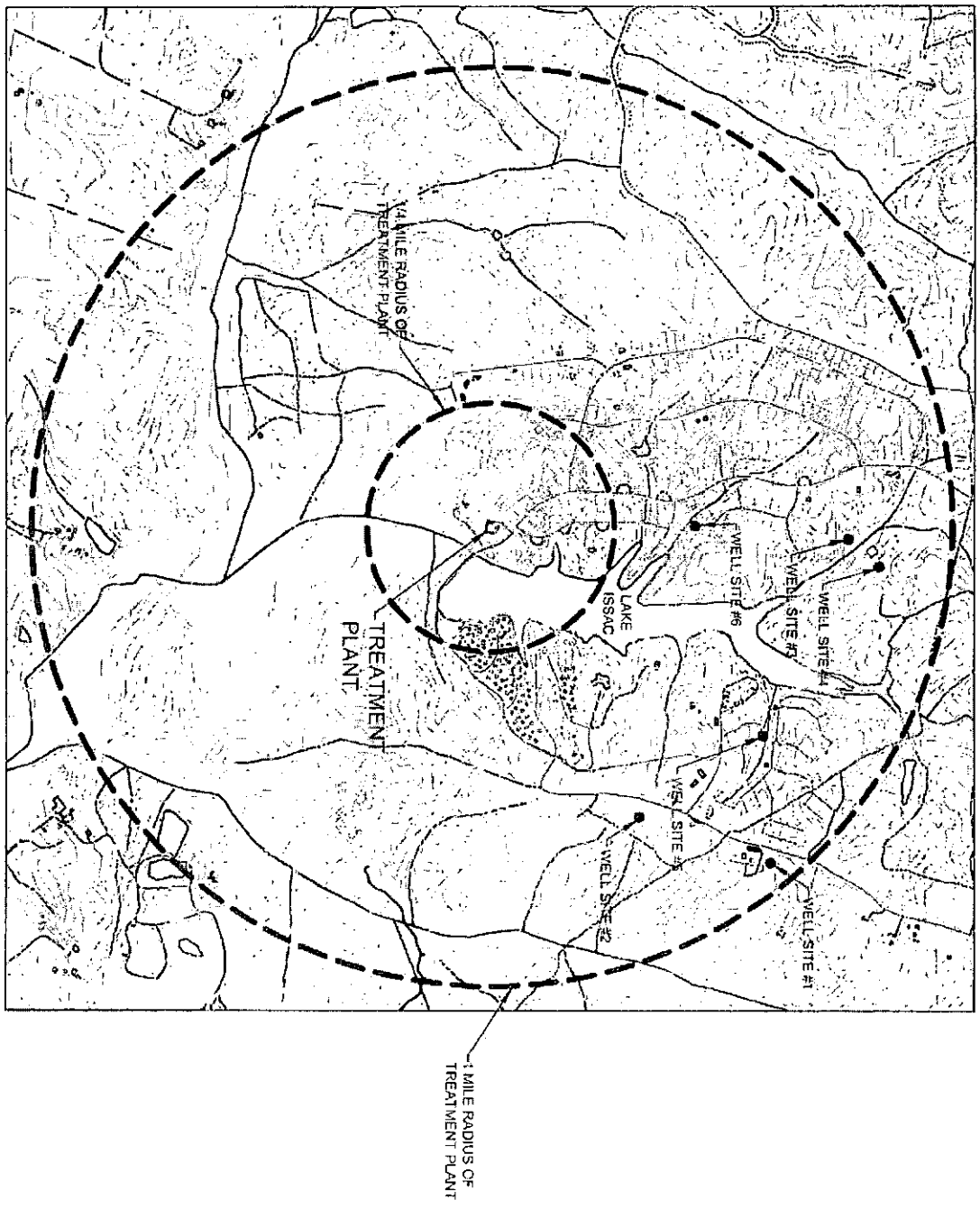
   Hauls sludge to the Louisa Regional Wastewater Treatment Plant.

8. Pollutant Concentrations. Using the table below or a separate attachment, provide sewage sludge monitoring data for the pollutants which limits in sewage sludge have been established in 9 VAC 25-31-10 et seq. for this facility's expected use or disposal practices. All data must be based on three or more samples taken at least one month apart and must be no more than four and one-half years old.

POLLUTANT	CONCENTRATION (mg/kg dry weight)	SAMPLE DATE	ANALYTICAL METHOD	DETECTION LEVEL FOR ANALYSIS
Arsenic	NO DATA			
Cadmium				
Chromium				
Copper				
Lead				
Mercury				
Molybdenum				
Nickel				
Selenium				
Zinc				

9. Certification. Read and submit the following certification statement with this application. Refer to the instructions to determine who is an officer for purposes of this certification. Indicate which parts of the application you have completed and are submitting:

   X Section A (General Information)
   X Section B (Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge)
   ___Section C (Land Application of Bulk Sewage Sludge)
   ___Section D (Surface Disposal)



Dewberry Dewberry & Davis, Inc.	DATE DEC. 2012	SCALE 1"=1200'	TITLE TOPOGRAPHIC MAP	SHEET NO. 1
	PROJ. NO. VA0076678	PROJECT SHENANDOAH CROSSING NPDES PERMIT		

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and official title _____

Signature _____ Date Signed 3/12/13

Telephone number 561 912 8000

Upon request of the department, you must submit any other information necessary to assess sewage sludge use or disposal practices at your facility or identify appropriate permitting requirements.

FACILITY NAME: Shenandoah Crossing STP VPDES PERMIT NUMBER: VA0076678

SECTION B. GENERATION OF SEWAGE SLUDGE OR PREPARATION OF A MATERIAL DERIVED FROM SEWAGE SLUDGE

Complete this section if your facility generates sewage sludge or derives a material from sewage sludge

1. Amount Generated On Site.
   Total dry metric tons per 365-day period generated at your facility: 4.5 dry metric tons

2. Amount Received from Off Site. If your facility receives sewage sludge from another facility for treatment, use or disposal, provide the following information for each facility from which sewage sludge is received. If you receive sewage sludge from more than one facility, attach additional pages as necessary.
   a. Facility name: _____
   b. Contact Person: _____
      Title: _____
      Phone ( ) _____
   c. Mailing address:
      Street or P.O. Box: _____
      City or Town: _____ State: _____ Zip: _____
   d. Facility Address: _____
      (not P.O. Box) _____
   e. Total dry metric tons per 365-day period received from this facility: _____ dry metric tons
   f. Describe, on this form or on another sheet of paper, any treatment processes known to occur at the off-site facility, including blending activities and treatment to reduce pathogens or vector attraction characteristics:

3. Treatment Provided at Your Facility.
   a. Which class of pathogen reduction is achieved for the sewage sludge at your facility?
      ___Class A ___Class B X_Neither or unknown
   b. Describe, on this form or another sheet of paper, any treatment processes used at your facility to reduce pathogens in sewage sludge: _____
   c. Which vector attraction reduction option is met for the sewage sludge at your facility?
      ___ Option 1 (Minimum 38 percent reduction in volatile solids)
      ___ Option 2 (Anaerobic process, with bench-scale demonstration)
      ___ Option 3 (Aerobic process, with bench-scale demonstration)
      ___ Option 4 (Specific oxygen uptake rate for aerobically digested sludge)
      ___ Option 5 (Aerobic processes plus raised temperature)
      ___ Option 6 (Raise pH to 12 and retain at 11.5)
      ___ Option 7 (75 percent solids with no unstabilized solids)
      ___ Option 8 (90 percent solids with unstabilized solids)
      X None or unknown
   d. Describe, on this form or another sheet of paper, any treatment processes used at your facility to reduce vector attraction properties of sewage sludge: _____
   e. Describe, on this form or another sheet of paper, any other sewage sludge treatment activities, including blending, not identified in a - d above: _____

4. Preparation of Sewage Sludge Meeting Ceiling and Pollutant Concentrations, Class A Pathogen Requirements and One of Vector Attraction Reduction Options 1-8 (EQ Sludge).
   (If sewage sludge from your facility does not meet all of these criteria, skip Question 4.)
   a. Total dry metric tons per 365-day period of sewage sludge subject to this section that is applied to the land: _____ dry metric tons
   b. Is sewage sludge subject to this section placed in bags or other containers for sale or give-away?

__Yes __No

5. Sale or Give-Away in a Bag or Other Container for Application to the Land.

(Complete this question if you place sewage sludge in a bag or other container for sale or give-away prior to land application. Skip this question if sewage sludge is covered in Question 4.)

a. Total dry metric tons per 365-day period of sewage sludge placed in a bag or other container at your facility for sale or give-away for application to the land:_____ dry metric tons

b. Attach, with this application, a copy of all labels or notices that accompany the sewage sludge being sold or given away in a bag or other container for application to the land.

6. Shipment Off Site for Treatment or Blending.

(Complete this question if sewage sludge from your facility is sent to another facility that provides treatment or blending. This question does not apply to sewage sludge sent directly to a land application or surface disposal site. Skip this question if the sewage sludge is covered in Questions 4 or 5. If you send sewage sludge to more than one facility, attach additional sheets as necessary.)

a. Receiving facility name: Louisa Regional WWTP

b. Facility contact: Wesley Basore
Title: Chief Wastewater Treatment Plant Operator
Phone: (540) 967-1122

c. Mailing address:
Street or P.O. Box: P.O. Box 9
City or Town: Louisa State: VA Zip: 23093

d. Total dry metric tons per 365-day period of sewage sludge provided to receiving facility: 4.5 dry metric tons

e. List, on this form or an attachment, the receiving facility's VPDES permit number as well as the numbers of all other federal, state or local permits that regulate the receiving facility's sewage sludge use or disposal practices:

Permit Number:	Type of Permit:
VA 0067954	VPDES

f. Does the receiving facility provide additional treatment to reduce pathogens in sewage sludge from your facility? X Yes __No
Which class of pathogen reduction is achieved for the sewage sludge at the receiving facility?
__Class A X Class B __Neither or unknown
Describe, on this form or another sheet of paper, any treatment processes used at the receiving facility to reduce pathogens in sewage sludge: Aerobic Digestion per Alternative 2 in 9VAC25-31-710

g. Does the receiving facility provide additional treatment to reduce vector attraction characteristics of the sewage sludge? X Yes __No ,
Which vector attraction reduction option is met for the sewage sludge at the receiving facility?
__ Option 1 (Minimum 38 percent reduction in volatile solids)
__ Option 2 (Anaerobic process, with bench-scale demonstration)
__ Option 3 (Aerobic process, with bench-scale demonstration)
X Option 4 (Specific oxygen uptake rate for aerobically digested sludge)
__ Option 5 (Aerobic processes plus raised temperature)
__ Option 6 (Raise pH to 12 and retain at 11.5)
__ Option 7 (75 percent solids with no unstabilized solids)
__ Option 8 (90 percent solids with unstabilized solids)
__ None unknown
Describe, on this form or another sheet of paper, any treatment processes used at the receiving facility to reduce vector attraction properties of sewage sludge: Alternative 4 in 9VAC25-31-720 B.,4.

h. Does the receiving facility provide any additional treatment or blending not identified in f or g above?
__Yes X No
If yes, describe, on this form or another sheet of paper, the treatment processes not identified in f or g above:

i. If you answered yes to f., g or h above, attach a copy of any information you provide to the receiving facility

to comply with the "notice and necessary information" requirement of 9 VAC 25-31-530.G.

j Does the receiving facility place sewage sludge from your facility in a bag or other container for sale or give-away for application to the land? ___Yes _X_No
If yes, provide a copy of all labels or notices that accompany the product being sold or given away.

k. Will the sewage sludge be transported to the receiving facility in a truck-mounted watertight tank normally used for such purposes? _X_ Yes ___ No. If no, provide description and specification on the vehicle used to transport the sewage sludge to the receiving facility.
Show the haul route(s) on a location map or briefly describe the haul route below and indicate the days of the week and the times of the day sewage sludge will be transported. _____
Sludge is taken from the plant on Route 749 north to Route 33 east to merge onto Routes 33 and 22 to Louisa to the Regional Plant turn in.

7. Land Application of Bulk Sewage Sludge.
(Complete Question 7.a if sewage sludge from your facility is applied to the land, unless the sewage sludge is covered in Questions 4, 5 or 6; complete Question 7.b, c & d only if you are responsible for land application of sewage sludge.)

a. Total dry metric tons per 365-day period of sewage sludge applied to all land application sites:_____dry metric tons

b. Do you identify all land application sites in Section C of this application? ___Yes ___No
If no, submit a copy of the Land Application Plan (LAP) with this application (LAP should be prepared in accordance with the instructions).

c. Are any land application sites located in States other than Virginia? ___Yes ___No
If yes, describe, on this form or on another sheet of paper, how you notify the permitting authority for the States where the land application sites are located. Provide a copy of the notification.
_____
_____

d. Attach a copy of any information you provide to the owner or lease holder of the land application sites to comply with the "notice and necessary" information requirement of 9 VAC 25-31-530 F and/or H (Examples may be obtained in Appendix IV).

8. Surface Disposal.
(Complete Question 8 if sewage sludge from your facility is placed on a surface disposal site.)

a. Total dry metric tons per 365-day period of sewage sludge from your facility placed on all surface disposal sites: _____ dry metric tons

b. Do you own or operate all surface disposal sites to which you send sewage sludge for disposal?
___Yes ___No
If no, answer questions c - g for each surface disposal site that you do not own or operate. If you send sewage sludge to more than one surface disposal site, attach additional pages as necessary.

c. Site name or number: _____

d. Contact person: _____
Title: _____
Phone: ( )_____
Contact is: ___Site Owner ___Site operator

e. Mailing address.
Street or P.O. Box:_____
City or Town:_____ State:_____ Zip:_____

f. Total dry metric tons per 365-day period of sewage sludge from your facility placed on this surface disposal site: _____ dry metric tons

g. List, on this form or an attachment, the surface disposal site VPDES permit number as well as the numbers of all other federal, state or local permits that regulate the sewage sludge use or disposal practices at the surface disposal site:

Permit Number:	Type of Permit:
_____	_____
_____	_____

9. Incineration.
(Complete Question 9 if sewage sludge from your facility is fired in a sewage sludge incinerator.)

a. Total dry metric tons per 365-day period of sewage sludge from your facility fired in a sewage sludge incinerator: _____ dry metric tons

b. Do you own or operate all sewage sludge incinerators in which sewage sludge from your facility is fired? ___Yes ___No
If no, answer questions c - g for each sewage sludge incinerator that you do not own or operate. If you send sewage sludge to more than one sewage sludge incinerator, attach additional pages as necessary.

c. Incinerator name or number: _____

d. Contact person: _____
Title: _____
Phone: ( )_____
Contact is: ___Incinerator Owner ___Incinerator Operator

e. Mailing address.
Street or P.O. Box:_____
City or Town:_____ State:_____ Zip:_____

f. Total dry metric tons per 365-day period of sewage sludge from your facility fired in this sewage sludge incinerator: _____ dry metric tons

g. List on this form or an attachment the numbers of all other federal, state or local permits that regulate the firing of sewage sludge at this incinerator:

Permit Number:	Type of Permit:
_____	_____
_____	_____

10. Disposal in a Municipal Solid Waste Landfill.

(Complete Question 10 if sewage sludge from your facility is placed on a municipal solid waste landfill. Provide the following information for each municipal solid waste landfill on which sewage sludge from your facility is placed. If sewage sludge is placed on more than one municipal solid waste landfill, attach additional pages as necessary.)

a. Landfill name: _____

b. Contact person: _____
Title: _____
Phone: ( )_____
Contact is: ___Landfill Owner ___Landfill Operator

c. Mailing address.
Street or P.O. Box:_____
City or Town:_____ State:_____ Zip:_____

d. Landfill location.
Street or Route #:_____
County: _____
City or Town: _____ State:_____ Zip:_____

e. Total dry metric tons per 365-day period of sewage sludge placed in this municipal solid waste landfill: _____ dry metric tons

f. List, on this form or an attachment, the numbers of all federal, state or local permits that regulate the operation of this municipal solid waste landfill:

Permit Number:	Type of Permit:
_____	_____
_____	_____

g. Does sewage sludge meet applicable requirements in the Virginia Solid Waste Management Regulation, 9 VAC 20-80-10 et seq., concerning the quality of materials disposed in a municipal solid waste landfill? ___Yes ___No

h. Does the municipal solid waste landfill comply with all applicable criteria set forth in the Virginia Solid Waste Management Regulation, 9 VAC 20-80-10 et seq.? ___Yes ___No

i. Will the vehicle bed or other container used to transport sewage sludge to the municipal solid waste landfill be watertight and covered? ___ Yes ___ No
Show the haul route(s) on a location map or briefly describe the route below and indicate the days of the week and time of the day sewage sludge will be transported. _____
_____

VPDES Permit Application Addendum

1. **Entity to whom the permit is to be issued:** Leisure Capital LLC
   Who will be legally responsible for the wastewater treatment facilities and compliance with the permit? This may or may not be the facility or property owner.

2. **Is this facility located within city or town boundaries?** Y /(N)

3. **Provide the tax map parcel number for the land where the discharge is located.**
   TMS 10-17 Parcel V (19.125 acres)

4. **For the facility to be covered by this permit, how many acres will be disturbed during the next five years due to new construction activities?** None

5. **What is the design average effluent flow of this facility?** 0.1 MGD
   For industrial facilities, provide the max. 30-day average production level, include units:

   In addition to the design flow or production level, should the permit be written with limits for any other discharge flow tiers or production levels? Y /(N)
   If "Yes", please identify the other flow tiers (in MGD) or production levels: _____
   Please consider the following questions for both the flow tiers and the production levels (if applicable): Do you plan to expand operations during the next five years? Is your facility's design flow considerably greater than your current flow?

6. **Nature of operations generating wastewater:**
   Domestic

   100 % of flow from domestic connections/sources
   Number of private residences to be served by the treatment works: 52

   0 % of flow from non-domestic connections/sources

7. **Mode of discharge:** X Continuous ___ Intermittent ___ Seasonal
   Describe frequency and duration of intermittent or seasonal discharges:
   _____

8. **Identify the characteristics of the receiving stream at the point just above the facility's discharge point:**
   - X Permanent stream, never dry
   - ___ Intermittent stream, usually flowing, sometimes dry
   - ___ Ephemeral stream, wet-weather flow, often dry
   - ___ Effluent-dependent stream, usually or always dry without effluent flow
   - ___ Lake or pond at or below the discharge point
   - ___ Other: _____

9. **Approval Date(s):**
   O & M Manual 2010 **Sludge/Solids Management Plan** NA

   Have there been any changes in your operations or procedures since the above approval dates? Y /(N)

Shenandoah Crossings Waste Water Treatment Plant
Permit # VA0076678

Sludge Treatment and Disposal Methods:

Sludge is wasted to a concrete holding tank (20,000 gallon capacity) located on the west side of the anoxic tank. Roto-Rooter out of Ruckersville Va. (540-672-9349) is the contracted hauler. Under the conditions of the agreement between Shenandoah Crossings and Roto-Rooter, when they are called to remove sludge, Roto-Rooter identifies an entity who will receive the sludge. Before they arrive for pick-up they have already received a manifest of the entity receiving the sludge. Roto-Rooter pays all fees concerned with disposal directly to whatever entity accepts the sludge. Roto-Rooter then invoices Shenandoah Crossings for their costs for the entire sludge removal service.

Westernik, Anna (DEQ)

From: Villhauer, Danylo [dvillhauer@Dewberry.com]
Sent: Friday, March 01, 2013 6:30 PM
To: Westernik, Anna (DEQ)
Cc: Tim Bernhardt
Subject: RE: Shenandoah Crossing STP (VA0076678) - VPDES Permit Renewal Application
Attachments: Revised VPDES Permit Application.pdf

Importance: High

Anna,

I have attached the updated VPDES permit application for your review. I have also provided responses in **red** to your below comments.

Please let me know if you need any additional information.

Sincerely,
Dan

Dan Villhauer, PE, LEED AP
Project Manager
Dewberry
4180 Innslake Drive
Glen Allen, VA 23060
Office: 804.290.7957
Direct: 804.205.3342
Fax: 804.290.7928
www.dewberry.com

From: Westernik, Anna (DEQ) [mailto:Anna.Westernik@deq.virginia.gov]
Sent: Friday, December 28, 2012 11:41 AM
To: Villhauer, Danylo
Cc: Tim Bernhardt
Subject: RE: Shenandoah Crossing STP (VA0076678) - VPDES Permit Renewal Application

Dan and Tim,

I have reviewed the received application and have the following comments:

1. I must receive copies of signature pages.
   It is my understanding that this has already been sent.
2. Please provide State Corporation Commission Certification.
   It is my understanding that this has already been sent.
3. Please indicate the presence of a Nutrient General Permit in NPDES Form 2A Part A.3.
   This has been included in the revised permit application.
4. Please indicate when sampling was conducted (NPDES Form 2A Part A.12).
   This has been included in the revised permit application.
5. Please indicate how the I&I problem was resolved (NPDES Form 2A Part B.1).
   There are no available records indicating an I&I problem. We reviewed water usage records over the winter months to be able to determine if a higher flow is being recorded at the WWTP than the metered water.

However, due to a high volu[redacted]f metered uses that do not return flow [redacted]he sewer system such as for pools, this was inconclusive (i.e. th[redacted]etered water volume was greater than t[redacted]WWTP influent volume).

6. Provide samples for TDS and Oil and Grease as requested by NPDES Form 2A Part B.6.
   This has been included in the revised permit application. We are still waiting on 1 TDS test result and 2 Oil & Grease test results and will forward this information once we receive it.
7. Question 3 of the VPDES Sludge Permit Application Form should indicate that sludge is land applied, even if it is done through the VPDES permit for the Louisa Regional WWTP.
   This has been included in the revised permit application.
8. The volume of sludge generated as indicated in Section B.1 of the VPDES Sludge Permit Application Form is much lower than that reported five years ago. Please indicate how this value was derived.
   Plant records indicate that 60,000 gallons of sludge is generated at the WWTP annually. For this estimate, it was assumed that the sludge had a solids concentration of 2% by weight which resulted in a dry weight of approximately 10,000 lbs (4.5 metric tons)
9. Provide the tax map and parcel number for the discharge location as requested by the VPDES Permit Application Addendum, Part 3.
   This has been included in the revised permit application.
10. Part 8 of the VPDES Permit Application Addendum should state discharge to a lake or pond.
    The discharge point is downstream of the dam to a stream.

Thanks,

Anna

From: Villhauer, Danylo [mailto:dvillhauer@Dewberry.com]
Sent: Wednesday, December 05, 2012 9:33 AMge**To:** Westernik, Anna (DEQ)
Cc: Tim Bernhardt
Subject: Shenandoah Crossing STP (VA0076678) - VPDES Permit Renewal Application
Importance: High

Anna,

Good morning. I have attached the VPDES permit renewal application for the Shenandoah Crossing STP (VPDES No. VA0076678). A copy of the application with signatures will follow within a week.

Please do not hesitate to call or email me if you have any questions or need additional information.

Sincerely,
Dan

Dan Villhauer, PE, LEED AP
Project Manager
Dewberry
4180 Innslake Drive
Glen Allen, VA 23060
Office: 804.290.7957
Direct: 804.205.3342
Fax: 804.290.7928
www.dewberry.com

ESS
Environmental Systems Service, Ltd.

Analytical Report

Bluegreen Resort/Shen Crossing
ATTN: Richard Randolph
174 Horseshoe Circle
Gordonsville, VA 22942

Report Date: 02/01/2013
Job #: 0001293
Customer #: 0001469
Customer PO #: STP
Collected By: Customer
Sample Location: WWTP

Sample ID#: 0012149 **Sample Source:** Effluent
Sample Date/Time: 01/15/2013 / 10:16 **Date Received:** 01/15/2013

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
Hexane Extractable Material	16.1	mg/l	5.00	EPA 1664A	01/23/2013	15:54	574

Sample ID#: 0012150 **Sample Source:** Effluent
Sample Date/Time: 01/15/2013 / 08:00 **Date Received:** 01/15/2013

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
Total Dissolved Solids	140	mg/l	10.0	SM 19 2540C	01/16/2013	16:30	JI

574 Samples subcontracted to VELAP ID# 460160

Environmental Systems Service, Ltd.

Analytical Report

Bluegreen Resort/Shen Crossing
ATTN: Richard Randolph
174 Horseshoe Circle
Gordonsville, VA 22942

Report Date: 02/05/2013
Job #: 0001319
Customer #: 0001469
Customer PO #: STP
Collected By: Customer
Sample Location: WWTP

Sample ID#: 0012467 **Sample Source:** Effluent
Sample Date/Time: 01/22/2013 / 10:26 **Date Received:** 01/22/2013

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
Hexane Extractable Material	6.50	mg/l	5	EPA 1664A	02/01/2013	07:43	574

Sample ID#: 0012468 **Sample Source:** Effluent
Sample Date/Time: 01/22/2013 / 08:00 **Date Received:** 01/22/2013

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
Total Dissolved Solids	390	mg/l	10.0	SM 19 2540C	01/25/2013	13:50	JI

574 Samples subcontracted to VELAP ID# 460160

ESS
Environmental Systems Service, Ltd.

Analytical Report

Bluegreen Resort/Shen Crossing
ATTN: Richard Randolph
174 Horseshoe Circle
Gordonsville, VA 22942

Report Date: 03/05/2013
Job #: 0001413
Customer #: 0001469
Customer PO #: STP
Collected By: Customer
Sample Location: WWTP

Sample ID#: 0013532 **Sample Source:** Effluent
Sample Date/Time: 02/19/2013 / 10:25 **Date Received:** 02/19/2013

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
Hexane Extractable Material	<5.00	mg/l	5.00	EPA 1664A	02/28/2013	13:02	574

Sample ID#: 0013533 **Sample Source:** Effluent
Sample Date/Time: 02/19/2013 / 08:00 **Date Received:** 02/19/2013

Parameter	Results	Unit	Report Limit	Method	Analysis Date	Time	INIT
Total Dissolved Solids	280	mg/l	10.0	SM 19 2540C	02/21/2013	15:13	JI

574 Samples subcontracted to VELAP ID# 460160

Commonwealth of Virginia

State Corporation Commission

CERTIFICATE OF FACT

I Certify the Following from the Records of the Commission:

That LEISURE CAPITAL, L.L.C. is duly organized as a limited liability company under the law of the Commonwealth of Virginia;

That the date of its organization is March 22, 1996; and

That the limited liability company is in existence in the Commonwealth of Virginia as of the date set forth below.

Nothing more is hereby certified.

Signed and Sealed at Richmond on this Date:
May 2, 2013

Joel H. Peck

Joel H. Peck, Clerk of the Commission

CISECOM
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